Listing of Claims:

1-67. (Canceled)

68. (Previously Presented) An apparatus for detecting the endpoint of a planarizing process comprising a microelectronic substrate having a top surface formed of a first substance, and a second substance, the second substance being implanted at a concentration of approximately 0.001% to approximately 0.1% of the first substance, and at a distance d as a layer with a thickness t beneath the top surface of the microelectronic substrate, the microelectronic substrate being configured with;

a planarizing device having a first portion and a second portion movable relative to the first portion to remove material from the microelectronic substrate positioned therebetween, the material including atoms of the first and second substances;

transport means to move the material from the planarizing device;

a mass spectrometer coupled to the transport means to receive the material and detect the atomic mass of the second substance ; and

a controller operatively coupled to the planarizing device and the mass spectrometer to control motion of the planarizing device upon receiving a control signal from the mass spectrometer.

69. (Original) The apparatus of claim 68, further comprising a vaporizer having an inlet coupled to the transport means to receive the material, a heat source to vaporize the atoms of the first and second and form a vapor, and an outlet coupled to the mass spectrometer.

70. (Original) The apparatus of claim 68, further comprising a fluid source in fluid communication with the platen to provide fluid to the platen during planarization of the microelectronic substrate, wherein the transport means includes a conduit coupled between the platen and the mass spectrometer to move the fluid and the material removed from the microelectronic substrate to the mass spectrometer.

71. (Canceled)

72. (Original) The apparatus of claim 68 wherein the polishing medium includes a polishing pad having abrasive particles that are removed from the polishing pad during planarization, further comprising:

a fluid source in fluid communication with the platen to provide fluid to the platen; and

a filter coupled to the transport means between the platen and the mass spectrometer to remove at least a portion of the abrasive particles from the fluid.

73-77. (Canceled)

78. (Original) The apparatus of claim 68 wherein the thickness t is approximately 100Å to approximately 500Å.

79. (Original) The apparatus of claim 68 wherein the distance d is approximately 200Å.

80. (Canceled)

81. (Original) The apparatus of claim 68 wherein the top surface of the microelectronic substrate has a topography that includes plurality of raised features and recesses and wherein the distance d beneath the top surface of the raised features is approximately the same as beneath the top surface of the recessed features.

82. (Original) The apparatus of claim 68 wherein the thickness t is greater than the distance d.

83. (Original) The apparatus of claim 68 wherein the first substance is comprised of silicon; and the second substance is comprised of tungsten.

84. (Original) The apparatus of claim 68 wherein the electrical properties of the first substance with the second substance implanted beneath the top surface thereof is approximately the same as electrical properties of the first substance without the second substance implanted beneath the top surface.

85. (Original) The apparatus of claim 68 wherein the first substance is comprised of silicon and the second substance is selected from the group consisting of tungsten, copper and aluminum.

86. (Original) The apparatus of claim 85 wherein the first substance is selected from tetraethylorthosilicate and borophosphate silicon glass.

87. (Original) The apparatus of claim 86 wherein the first substance is tetraethylorthosilicate.

88. (Original) The apparatus of claim 86 wherein the first substance is borophosphate silicon glass.

89. (Original) The apparatus of claim 86 wherein the top surface is comprised of plurality of first surfaces having a height measured from a back surface of the semiconductor substrate, and includes a plurality of recessed regions defining a plurality of second surfaces having a second height measured from the back surface of the semiconductor substrate that differs than the first surface height, and wherein the second substance is implanted in the in the first substance at the same depth d beneath the first surface and beneath the second surface.

90. (Original) The substrate of claim 84 further including a plurality of second recesses defining a third surface having an intermediate height relative to the first and second surface heights, and wherein the second substance is implanted at the same depth beneath the third surface as the depth beneath the first and second surfaces.

91. (Original) The substrate of claim 84 wherein the second substance is implanted at a different depth d beneath the first surface and the second surface.

92. (Original) The substrate of claim 91 wherein the endpointing material implanted beneath the first surface forms a first layer having a first thickness t, and the endpointing material beneath the second surface forms a second layer having a second thickness also equal to t, and wherein a portion of the first thickness at depth d below the first surface overlaps with a portion of the second thickness implanted beneath the second surface.

93. (Original) The substrate of claim 91 wherein the first and second thickness of the first and second layers, respectively, is greater than a linear dimension defining the first and second depths at which the first and second layers are implanted beneath the first and second surfaces.